

APR 27

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Hayes, et al.

Art Unit: 3691

Application No.: 09/750,603

Examiner: Stefanos Karmis

Filed: December 28, 2000

Docket No.: 99181-US-NP  
XERZ 2 00346

For: **CONFIGURABLE BILLING SYSTEM SUPPORTING MULTIPLE  
PRINTER PRODUCTS AND BILLING SYSTEMS**

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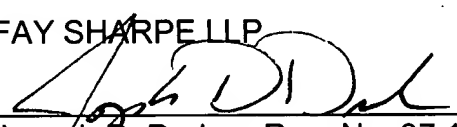
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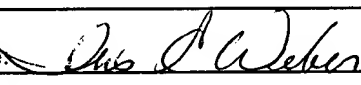
Respectfully submitted,

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April 25, 2007

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PATENT APPLICATION

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**BRIEF ON APPEAL**

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Appeal from Group 3691

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This Appeal Brief is in furtherance to the Notice of Appeal that was mailed to the U.S. Patent and Trademark Office on January 29, 2007, in regard to the above-referenced patent application.

The fees required under 37 C.F.R. §1.17 and any required petition for extension of time for filing this brief and fees therefor are addressed in the accompanying transmittal of Appeal Brief.

I. REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is the Assignee (Xerox Corporation, Stamford, Connecticut) by way of an Assignment recorded in the U.S. Patent and Trademark Office at Reel 011446, Frame 0371.

## II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

The status of the claims set forth in the final Office Action mailed August 8, 2006 and reiterated in the Advisory Action mailed January 12, 2007 was and is:

Rejected – claims 1-23.

The present Appeal is directed specifically to claims 1-23.

#### IV. STATUS OF AMENDMENTS

An Amendment (Amendment E (After Final)) adding a comma to claim 21 and adding the word –events-- to claim 22 was filed subsequent to the Final Rejection on September 25, 2006.

An Advisory Action mailed November 28, 2006 indicated that Amendment E (After Final) would not be entered because the addition of the word –events-- allegedly raised new issues.

Accordingly, Applicants filed an Amendment (Amendment F (After Final)) on December 11, 2006 which was similar to Amendment E but which did not include the amendment to claim 22.

On January 12, 2007, an Advisory Action was mailed indicating that Applicants' Amendment F will be entered for purposes of Appeal and providing further comments regarding the rejection of the claims.



## V. SUMMARY OF CLAIMED SUBJECT MATTER

The present application is directed toward a configurable billing module that can support, by virtue of its configurability, a wide variety of machines and systems. For example, the billing module can support or perform accounting functions for a variety of document processing systems. For instance, the billing module accepts a billing strategy from an associated document processing system. The billing strategy lists parameters, events, or aspects of interest that the billing module is to monitor. Additionally, the billing strategy provides algorithms that define the function of billing meters. The billing module can instantiate and/or update the meters based on the monitored parameters or aspects of interest as indicated by the billing strategy. The list of aspects of interest and the list of meter descriptions may be arbitrarily long. The ability of the billing module to receive and interpret arbitrary or custom billing strategies allows the billing module (or the software associated with the billing module) to be reused in a wide variety of applications. Device developers only need define the billing strategy, therefore, the need to “hard code” custom billing software for each new device is eliminated (Abstract; page 1, lines 13-17; page 6, lines 1-3, lines 13-17; page 7, lines 25-26; page 9, lines 14-29).

The ability to accept and process arbitrarily long billing strategies differentiates the claimed subject matter from the subject matter discussed in the cited references. For example, **claim 1** recites:

A configurable billing system for a machine (e.g., FIG. 1, 110; FIG. 3, 310), the machine operative to output a product or service and including a plurality of aspect sensors (e.g., FIG. 1, 124; FIG. 3, 324), the sensors operative to detect the delivery of

aspects of the product or service and to report the delivery to the billing system, the billing system comprising:

a coded billing strategy (e.g., FIG. 2, 210; FIG. 4, 410; page 6, line 11- page 9, line 29; page 10, line 24 – page 11, line 28) **including an arbitrarily long list of aspects of interest** (e.g., FIG. 2, 214; FIG. 4, 414) **and an arbitrarily long list of meter descriptions** (FIG. 2, 218; FIG. 4, 418; FIG. 7, line 25 – page 9, line 7; page 10, line 26 – page 11, line 28) defined for the machine; and

a plurality of meters (page 9, lines 8-13) updated by the billing system for recording the delivery of the aspects of the product or service based on the billing strategy, whereby the billing system tallies the aspects in a manner defined in the billing strategy.

Independent **claim 6** recites: A configurable billing system for an document processing system (e.g. FIG. 1, 110; FIG. 3, 310), the document processing system operative to produce documents and including a plurality of aspect sensors (FIG. 1, 124; FIG. 3, 324; page 5, lines 16-21; page 11, line 29 – page 12, line 14) operative to detect document production events and to report the aspects of the document production to the billing system, the billing system comprising:

a billing strategy description (FIG. 2, 210; FIG. 4, 410; page 6, line 11 – page 9, line 28; page 10, line 24 – page 11, line 28), **including an arbitrarily long list of aspects of interest** (FIG. 2, 214; FIG. 4, 414; page 6, line 13 – page 7, line 24; page 10, line 24 – page 11, line 2) **and an arbitrarily long list of meter descriptions** (FIG. 2, 218; FIG. 4, 418; page 7, line 25 – page 9, line 7; page 10, line 24 – page 11, line 28), accessible by the billing system;

a plurality of meters (page 9, lines 8-13) defined in the billing strategy; and

a billing module (FIG. 1 and FIG. 3, 130; page 5, line 25 – page 6, line 6; page 12, lines 12-25) operative to update the plurality of meters according to the billing strategy description.

Independent **claim 16** recites: A document processing system (e.g., FIG. 1, 110, FIG. 3, 310; page 5, lines 10-30; page 9, line 29 – page 10, line 16) comprising:

a print engine (e.g., FIG. 1, 118; FIG. 3, 318; page 1, lines 12-14; page 10, lines 1-2);

a configurable billing system operative to follow a billing strategy specification (FIG. 2, 210; FIG. 4, 410; page 6, line 11 – page 9, line 28; page 10, line 24 – page 11, line 28) including an arbitrarily long list of document production events of interest (FIG. 2, 214; FIG. 4, 414; page 6, line 13 – page 7, line 24; page 10, line 24 – page 22, line 2), an arbitrarily long list of meter descriptions (FIG. 2, 218; FIG. 4, 418; page 7, line 25 – page 9, line 7; page 10, line 24 – page 11, line 28) and a machine readable script (page 13, lines 6-8, 16-18) for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy specification; and,

a marker module (e.g., FIG. 1, 126; FIG. 3, 326; page 1, lines 21- 26; page 10, line 9-13) operative to control the print engine in the production of documents, and to report document production events to the billing system.

Independent **claim 19** recites: A method (e.g., FIG. 5, 510) for developing and using a universal billing module, the method comprising:

predefining a billing strategy specification (e.g., 520; page 13, line 3-8), the billing strategy specification including a list of parameters (FIG. 2, 214; FIG. 4, 414; page 6, line 13 – page 7, line 24; page 10, line 24 – page 11, line 2) with implicit or explicit

communication mechanisms and data parsing information (page 6, lines 15-17; page 7, lines 15-24), and process algorithm information in the form of a machine readable script (page 13, lines 6-8, 16-18);

storing the billing strategy specification in a machine-readable form (FIG. 5, 524);

reading the stored billing strategy specification (FIG. 5, 530; page 13, lines 8-9);

instantiating meter data structures as directed by the read billing strategy specification (FIG. 5, 540; page 13, lines 9-14);

monitoring a document processing procedure as directed by the read billing strategy specification (FIG. 5, 550; page 13, lines 15-16); and

updating the meter data structures as directed by the read billing strategy specification (FIG. 5, 560; page 13, lines 16-18).

Independent **claim 20** recites: A configurable billing system for a machine (e.g., FIG. 1, 110; FIG. 3, 310), the machine operative to output a product or service and including a plurality of aspect sensors (FIG. 1, 124; FIG 3, 324; page 5, lines 16-21; page 11, line 29 – page 12, line 14), the sensors being operative to detect the delivery of aspects of the product or service and to report the delivery to the billing system, the billing system comprising:

a custom billing strategy file (FIG. 2, 210; FIG. 4, 410; page 6, line 11 – page 9, line 28; page 10, line 24 – page 11, line 28) including an **arbitrarily long list of aspects of interest** (FIG. 2, line 214; FIG. 4, 414; page 6, line 13 – page 7, lines 24; page 10, line 24 – page 11, line 2) **and an arbitrarily long list of meter descriptions** (FIG. 2, 218; FIG. 4, 418; page 7, line 25 – page 9, line 7; page 10, line 24 – page 11, line 28) defined for the machine;

a means for loading the custom billing strategy file (page 6, lines 1-10; page 7, lines 15-24; page 9, lines 4-28; page 10, lines 17-23; page 12, lines 20-21; page 13, lines 8-9); and,

a plurality of meters (page 9, lines 8-13) instantiated (FIG. 5, 540, page 13, lines 9-14) by the billing system for recording the delivery of the aspects of the product or service based on the billing strategy whereby the billing system tallies the aspects in a predefined manner.

Independent **claim 21** recites: A configurable billing system for a document processing system (e.g., FIG. 1, 110; FIG. 3, 310), the document processing system operative to produce documents and including one or more aspect sensor (FIG 1, 124; FIG. 3, 324; page 5, lines 16-21; page 11, line 20 – page 12, line 14) operative to detect document production events and to report the document production events to the billing system, the billing system comprising:

a coded billing strategy description (FIG. 2, 210; FIG. 4, 410; page 6, line 28; page 10, line 24 – page 11, line 28), accessible by the billing system, including a machine-readable script (page 13, lines 6-8, 16-18);

a plurality of meters (page 9, lines 8-13) defined in the machine-readable script as mathematical functions (e.g., FIG. 2, 222, 226, 230, 218; FIG. 4, 422, 426, 418; page 8, line 11 – page 9, line 7; page 11, lines 3-28) of information received from one or more aspect sensors; and

a billing module (FIG. 1 and FIG. 3, 130; page 5, line 25 – page 6, line 6; page 12, lines 12-25) operative to update the plurality of meters according to the functions (e.g., FIG. 2, 222, 226, 230, 218; FIG. 4, 422, 426, 418; page 7, line 26 – page 9, line 7;

page 11, lines 3-28) implemented by the machine-readable script (page 13, lines 6-8, 16-18).

Independent **claim 22** recites: A document processing system (e.g., FIG. 1, 110; FIG. 3, 310) comprising:

a print engine (e.g., FIG. 1, 118; FIG. 3, 318; page 1, lines 12-14; page 10, lines 1-2);

a configurable billing system operative to run a machine-readable script (page 13, lines 6-8, 16-18) received in a billing strategy file (FIG. 2, 210; FIG. 4, 410; page 6, line 11 – page 9, line 28; page 10, line 24 – page 11, line 28), the machine-readable script being operative to, at least one of, instantiate (FIG. 5, 540; page 13, lines 9-14) and update a set of meters for recording the occurrence of document production (page 6, line 13 – page 7, line 14; page 7, line 25 – page 9, line 7; page 11, lines 3-28); and,

a marker module (e.g., FIG. 1, 126; FIG. 3, 326; page 1, lines 21-26; page 10, lines 9-13) operative to control the print engine in the production of documents, and to report document production events to the billing system.

Independent **claim 23** recites: A document processor (e.g., FIG. 1, 110; FIG. 3, 310) operative to produce printed documents, the document processor comprising:

a print engine (e.g., FIG. 1, 118; FIG. 3, 318; page 1, lines 12-14; page 10, lines 1-2);

at least one aspect sensor (FIG. 1, 124; FIG. 3, 324; page 5, lines 16-21; page 11, line 20 – page 12, line 14) operative to sense and report at least one of an impression count, an impression event, a set count, a diagnostic impression event, a media description, a use of highlight color and a use of full color related to a production of a document (page 6, line 13 – page 7, line 14);

a billing strategy file (FIG. 2, 210; FIG. 4, 410; page 6, line 11 – page 9, line 28; page 10, line 24 – page 11, line 28) defining a billing strategy in machine readable form, the billing strategy file describing **an arbitrarily large number of mathematical functions** (FIG. 2, 218; FIG. 4, 418; page 7, line 25 – page 9, line 7; page 10; line 24 – page 11, line 28) **of an arbitrarily large number of meters** (page 9, lines 8-13) for processing and recording information reported by the at least one aspect sensor;

a billing module (FIG. 1 and FIG. 3, 130; page 5, line 25 – page 6, line 6; page 12, lines 12-25) operative to receive the billing strategy file and instantiate the **arbitrarily large number of meters** according to the billing strategy; and

a marker module (e.g., FIG. 1, 126; FIG. 3, 326; page 1, lines 21-26; page 10, lines 9-13) operative to control the print engine in the production of the document.

**Claim 2** recites: The configurable billing system of claim 1 wherein the coded billing strategy further comprises information regarding a format in which information regarding the aspects of interest will be communicated to the billing system by the machine (page 7, lines 15-24).

**Claim 3** recites: The configurable billing system of claim 1 wherein each meter in the list of meters is described as a function of at least one of the listed aspects of interest (FIG. 2, 222, 226, 230, 218; FIG. 4, 422, 426, 418; page 7, line 25 – page 9, line 7; page 11, lines 3 -28).

**Claim 4** recites: The configurable billing system of claim 1 wherein the coded billing strategy comprises information associated with the listed meters, the information describing the function of the meters (FIG. 2, 222, 226, 230, 218; FIG. 4, 422, 426, 418; page 7, line 25 – page 9, line 7; page 11, lines 3 -28).

**Claim 5** recites: The configurable billing system of claim 1 wherein the plurality of meters are instantiated in memory, by the billing system, according to the coded billing strategy (FIG. 5, 540; page 13, lines 9-14).

**Claim 7** recites: The configurable billing system of claim 6 wherein the plurality of meters are instantiated in memory (FIG. 5, 540; page 13, lines 9-14), by the billing module, according to the billing strategy description (FIG. 2, 210; FIG. 4, 410; page 6, line 11 – page 9, line 28; page 10, line 24 – page 11, line 28).

**Claim 8** recites: The configurable billing system of claim 6 wherein the list of aspects of interest comprises an impression count (page 6, lines 17-19).

**Claim 9** recites: The configurable billing system of claim 6 wherein the list of aspects of interest comprises an impression event flag (page 6, line 17).

**Claim 10** recites: The configurable billing system of claim 6 wherein the list of aspects of interest comprises a set count (page 6, line 25).

**Claim 11** recites: The configurable billing system of claim 6 wherein the list of aspects of interest comprises a set completion flag (page 6, line 30 page 7, line 1).

**Claim 12** recites: The configurable billing system of claim 6 wherein the list of aspects of interest comprises a diagnostic impression flag (page 6, line 25).

**Claim 13** recites: The configurable billing system of claim 6 wherein the list of aspects of interest comprises a media descriptor (page 6, line 25).

**Claim 14** recites: The configurable billing system of claim 6 wherein the list of aspects of interest comprises a highlight color flag (page 6, line 26).

**Claim 15** recites: The configurable billing system of claim 6 wherein the list of aspects of interest comprises a full color flag.



**Claim 17** recites: The document processing system of claim 16 wherein the marker module is operative to deliver the billing strategy to the billing system (page 6, lines 1-10; page 9, line 14 – page 10, line 23).

**Claim 18** recites: The document processing system of claim 16 wherein the print engine further comprises a xerographic printer (page 5, line 14; page 10, line 2).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether **claims 1-18, 20 and 23** are indefinite under 35 U.S.C. §112, second paragraph, for including or depending on claims that include phrases such as --arbitrarily long-- and --arbitrarily large number--.

Whether **claims 1-7, 16, 17 and 19-23** are anticipated by U.S. Patent No. 6,516,157 to Maruta, et al. ("Maruta") under 35 U.S.C. §102(e).

Whether **claims 8-15 and 18** are patentable over Maruta in light of 35 U.S.C. §103(a).

Whether the amendment to **claim 22** presented in Applicants' Amendment E changing the phrase --occurrence of document production-- to --occurrence of document production events-- raises new issues.

## VII. ARGUMENT

### A. The Claims are Definite

**Claims 1-18, 20 and 23** were rejected under 35 U.S.C. §112, second paragraph as being indefinite for including the term “arbitrarily” in claims **1, 6, 16, 20 and 23**. The Office Action asserts that the term “arbitrarily” is a relative term which renders the claim indefinite and asserts that one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The Applicants respectfully disagree.

Merriam-Webster's Unabridged Dictionary: copyright 2000, defines arbitrarily as:  
in an arbitrary manner: at will.

**arbitrarily** : in an arbitrary manner : at will <the genus will here be rather arbitrarily described as though it were one man W.S.White> <inflexible rules, arbitrarily ordained Havelock Ellis> <arbitrarily set the lunch hour at one o'clock>

The same reference defines arbitrary as 1: depending on choice or discretion; 2a(1): arising from unrestrained exercise of the will, caprice or personal preference: given to expressing opinions that arise thus (2); selected at random or as a typical example; b : based on random or convenient selection or choice rather than on reason or nature; and 3a: given to willful irrational choices and demands : IMPERIOUS; b: characterized by absolute power or authority.

**arbitrary** : depending on choice or discretion; specifically : determinable by decision of a judge or tribunal rather than defined by statute <an *arbitrary* decision> <*arbitrary* punishment>

**2 a (1)** : arising from unrestrained exercise of the will, caprice, or personal preference : given to expressing opinions that arise thus **(2)** : selected at random or as a typical example <such *arbitrary* items as clothing, room furnishings, travel *Official Register of Harvard University*> **b** : based on random or convenient selection or choice rather than on reason or nature <an *arbitrary* symbol> <*arbitrary* division of historical studies into watertight compartments A.J.Toynbee> **c** *Britain* , of a *printing character* : not usually found in the ordinary type font

**3 a** : given to willful irrational choices and demands : IMPERIOUS <a man of iron will and *arbitrary* decision> **b** : characterized by absolute power or authority : DESPOTIC, TYRANNICAL <*arbitrary* rule> <an *arbitrary* governor>

It is respectfully submitted that one of ordinary skill in the art would understand that an arbitrarily long list would have a length depending on choice or discretion based on convenient selection or choice. As further evidence of this, we submit the following discussion of --arbitrarily large-- found on the Internet website Wikipedia, in which we have highlighted a notation acknowledging the existence of the terms "arbitrarily small," "arbitrarily long" and other similar phrases.

In mathematics, the phrase **arbitrarily large** is used in contexts such as:

$f(x)$  is true for arbitrarily large  $x$

which is actually shorthand for:

for every  $N \in \mathbb{R}$ ,  $f(x)$  is true for at least one  $x \geq N$ .

This should not be confused with the phrase "sufficiently large". For instance, it is true that prime numbers can be arbitrarily large, but it is not true that all sufficiently large numbers are prime. It is also worth noting that "arbitrarily large" does not mean "infinitely large" - for instance, while prime numbers can be arbitrarily large, there is no such thing as an infinitely large prime.

In some cases, phrases such as " $f(x)$  is true for arbitrarily large  $x$ " is used primarily for emphasis, as in " $f(x)$  is true for all  $x$ , no matter how large  $x$  is." In such cases, the phrase "arbitrarily large" does not have the meaning indicated above, but is in fact logically synonymous with "all."

**One can of course define terms such as "arbitrarily small," "arbitrarily long," and others in a similar manner.**

It is respectfully submitted that the phrase --arbitrarily long-- is not a relative term. However, even if the phrase --arbitrarily long-- is considered to be a relative term, the fact that claim language, including terms of degree may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph.

Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification (MPEP 2173.05(b)). Since, as explained above, one of ordinary skill in the art would understand what is claimed, it is respectfully submitted that **claims 1, 6, 16, 20 and 23**, as well as **claims 2-5, 7-15, 17 and 18**, which depend respectively therefrom, are not indefinite. Therefore, reversal of the rejections under 35 U.S.C. 112, second paragraph, are respectfully requested.

As further evidence that ones of ordinary skill in the art would understand what is claimed in regard to the recitation of --arbitrarily long-- and --arbitrarily large number--, it is respectfully submitted that examiners at the U.S. Patent and Trademark Office and inventors presenting applications thereto, have understood and do understand what is meant by phrases such as "arbitrarily long" and "arbitrarily large number." For example, after a brief search, the Applicants found approximately twenty-one issued patents that include the phrase "arbitrarily long" in respective claims thereof.

For instance, claims 48 and 76 of U.S. Patent No. 7,117,034 B2, which issued on October 3, 2006, (a date subsequent to the present examiner's first assertion that the word --arbitrarily-- rendered the claims of the present application indefinite), both include the recitation: "where  $T_1$  may be **arbitrarily long**."

Claims 1 and 8 of U.S. Patent No. 6,999,891 B2 make reference to a system that "generates **arbitrarily long** test data on the data lines according to the test pattern." Claim 2 of the same patent recites that the test pattern is **arbitrarily long**.

Claims 4 and 18 of U.S. Patent No. 6,959,309 B2 include recitation related to "**arbitrarily long** file names."

Claims 6, 7 and 8 of U.S. Patent No. 6,538,488 B2 recite "**arbitrarily long** durations."

Claim 1 of U.S. Patent No. 6,507,920 B1 recites an "interconnect having an **arbitrarily long** length."

Claims 5 and 10 of U.S. Patent No. 6,300,888 B1 recite an "entropy encoder used to assign variable length entropy codes to **arbitrarily long** sequences of coefficients." Claim 29 of the same patent recites "a method of encoding an **arbitrarily long** series of audio input coefficients."

Claim 3 of U.S. Patent No. 6,298,453 B1 recites "running one of the first and second oscillator for an **arbitrarily long** period of time."

Claim 8 of U.S. Patent No. 6,084,535 recites "the maximum number of consecutive zeroes in even or odd bit positions at the output of the partial response channel is **arbitrarily long**."

Claim 4 of U.S. Patent No. 5,761,698 recites "said A/V/CD controller/coprocessor performs **arbitrarily long** sequences of graphics operations."

Claim 1 of U.S. Patent No. 5,654,542 recites "a method of generating a broad band signal of **arbitrarily long** duration."

Claim 11 of U.S. Patent No. 5,568,614 recites "a streaming device adaptor controlling a device performing operations requiring processing of **arbitrarily long** data streams."

Element (c) of claim 9 of U.S. Patent No. 5,558,774 recites "maintaining a temperature in the range from 50°C - 60°C, and substantially constant HRT over and **arbitrarily long** time."

Element (e) of claim 1 of U.S. Patent No. 5,488,908 recites “wherein said electrically activated detonator means and said firing and control circuitry can be directly interconnected for an **arbitrarily long** period of time before providing said high voltage.” Element (d) of claim 3 recites “interconnecting said electrically activated detonator means and said firing and control circuitry for an **arbitrarily long** period of time before providing said high voltage.” Claims 4 and 5 recite “**arbitrarily long** leads.”

Claim 21 of U.S. Patent No. 5,448,561 recites “thereby permitting transmissions of **arbitrarily long** messages.”

Claim 4 of U.S. Patent No. 5,181,191 recites “wherein said input and output scan registers and any internal scan registers in the data propagation paths are (a) serially operated pursuant to a first clock that can have an **arbitrarily long** period to serially scan test values.” Claim 8 recites “operating the internal scan registers in the data propagation paths in the serial mode pursuant to a series of cycles of a first clock that can have an **arbitrarily long** period to serially scan in scan registered test values.”

Claims 1 and 4 of U.S. Patent No. 4,385,350 each recite “several processors, each having an **arbitrarily long** unique logical address.”

Claims 2 and 3 of U.S. Patent No. 4,253,114 each recite “the time-chopped scrambling sequence having an **arbitrarily long** repetition cycle.”

Claim 3 of U.S. Patent No. 4,108,543 recites “means for arresting said adjustable rotary member at an open rest position thereof for making **arbitrarily long** exposures during a time interval between the end of a film advancement and the activation of said primary control means.”

Claim 4 of U.S. Patent No. 4,065,666 recites “a plurality of said systems each deposited on a separate chip to operate on **arbitrarily long** operands.”

Claim 1 of U.S. Patent No. 3,793,541 recites "said guiding structure having a guiding strength that provides **arbitrarily long** path lengths in said fluid medium in the presence of thermal effects."

Claim 7 of U.S. Patent No. 3,249,097 makes reference to "an **arbitrarily long** marina system structure." Claim 12 refers to "an **arbitrarily long** deck assembly slab."

Accordingly, it is respectfully submitted that phrases such as "arbitrarily long" are understood by ones of ordinary skill in the art, including, for example, the U. S. Patent and Trademark Office patent examiners. Accordingly, it is respectfully submitted that the phrase "arbitrarily long" and the phrase "arbitrarily large number" are not indefinite. Therefore, it is respectfully submitted that **claims 1-18, 20 and 23** are definite and particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Accordingly, reversal of the rejections under 35 U.S.C. 112, second paragraph, is respectfully requested.

#### B. The Present Application

As indicated above, the present application is directed toward a configurable billing module that can support, by virtue of its configurability, a wide variety of machines and systems. For example, the billing module can support or perform accounting functions for a variety of document processing systems. For instance, the billing module accepts a billing strategy from an associated document processing system. The billing strategy lists parameters, events, or aspects of interest that the billing module is to monitor. Additionally, the billing strategy provides algorithms that define the function of billing meters. The billing module can instantiate and/or update



the meters based on the monitored parameters or aspects of interest as indicated by the billing strategy. The list of aspects of interest and the list of meter descriptions may be arbitrarily long. The ability of the billing module to receive and interpret arbitrary or custom billing strategies allows the billing module (or the software associated with the billing module) to be reused in a wide variety of applications. Device developers need only define the billing strategy, therefore, the need to "hard code" custom billing software for each new device is eliminated. For example, the billing strategy includes a script for instantiating and updating billing meters, and includes implicit or explicit communication mechanisms and data parsing information. (Abstract, page 1, lines 13-17, page 6, lines 1-3, lines 13-17, page 7, lines 25-26, page 9, lines 14-29).

### C. The Newly Cited Reference

In stark contrast, the newly cited reference to Maruta does not disclose or suggest a configurable billing system including a coded billing strategy. Instead, it is respectfully submitted that Maruta discusses a printing system that calculates printing cost using data input via a remote data input terminal and returns calculated printing cost to the remote data input terminal.

Maruta explains that the cost calculation is based on the type of document being printed. The system of Maruta includes four counters identified as --color small--, --color large--, --black-and-white small-- and --black-and-white large--. The count value of the counter corresponding to each type of document is incremented every time a relevant document is read by a pre-scanning operation. When the pre-scanning operation for all the documents is completed, the corresponding unit cost is multiplied

by the count value of each counter and the total sum thereof obtained. The total sum is displayed as shown in FIG. 8C on a liquid crystal panel 421 in operation panel 640. The user can identify the cost of a desired copy job beforehand to decide whether to modify the job or to initiate the intact copy job (column 9, lines 19-41).

It is respectfully submitted that Maruta does not disclose or suggest that the four counters of Maruta are anything but the "hard coded" variety discussed, for example, on page 1, line 20 - page 2, line 28, and, more particularly, on page 2, lines 21-28, of the present application. It is respectfully submitted that the billing system of Maruta is not configurable. Furthermore, even if the billing system of Maruta could be construed as being configurable, the billing system of Maruta does not include a coded billing strategy such as that depicted, for example, in FIG. 2 and FIG. 4 of the present application and discussed, for example, on page 6, line 11 - page 7, line 14; page 7, line 25 - page 9, line 28; page 10, line 24 - page 12, line 14 that is read by a billing module.

Furthermore, even if Maruta could be construed as disclosing a configurable billing system including a coded billing strategy, Maruta does not disclose or suggest a configurable billing system including a coded billing strategy that includes a list of aspects of interest and a list of meter descriptions. Moreover, Maruta does not disclose or suggest a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions.

D. The Claims are not Anticipated

Claims 1-7, 16, 17 and 19-23 were rejected under 35 U.S.C. §102(e) as being anticipated by Maruta.

In regard to the rejection of **claims 1, 6, 20 and 21** and in support of the assertion that Maruta discloses a configurable billing system including a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine, the Office Action that was mailed on April 24, 2006 (rejections of which were maintained by the Final Office Action, which was mailed August 8, 2006), directs the attention of the Applicants to column 10, lines 1-10. It is respectfully submitted that the cited portion of Maruta explains that the cost calculation process (S104) will be described in detail with reference to FIG.10. The copy operation process (S105) is directed to execute a copy operation sequence. When "cost calculation" is selected at the initial screen of FIG. 8A, the rate is displayed according to the cost calculation process, and a copy operation is executed after confirmation is made of the indicated cost. When "start copy" is selected at the initial screen of FIG. 8A, a copy operation process is immediately executed by turning on start key 642.

It is respectfully submitted that nothing in column 10, lines 1-10, discloses or suggests a configurable billing system. Moreover, even if the cited portion of Maruta could be construed as disclosing a configurable billing system, the cited portion does not disclose or suggest a coded billing strategy including a list of aspects of interest and a list of meter descriptions (e.g., FIG. 2, FIG. 4 of the present application).

For at least the foregoing reasons, **claim 1**, as well as **claims 2-5**, which depend therefrom is not anticipated and is not obvious in light of Maruta.

Furthermore, even if Maruta could be construed as disclosing a configurable billing system including a coded billing strategy including a list of aspects of interest and

a list of meter descriptions, Maruta does not disclose or suggest a method for allowing such lists to be arbitrarily long.

In this regard the Office Action indicates that the Examiner interpreted --arbitrarily long-- as "at least one." However, it is respectfully submitted that this interpretation is inappropriate. As indicated above with regard to the rejections under 35 U.S.C. §112, ones of ordinary skill in the art would understand the phrase "arbitrarily long" to indicate the configurable nature of the billing system and the coded billing strategy associated therewith as recited, for example, in **claim 1**.

It is respectfully submitted that Maruta does not disclose or suggest a configurable billing system including a coded billing strategy or a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions.

For at least the foregoing additional reasons, **claim 1**, as well as **claims 2-5**, which depend therefrom, is not anticipated and is not obvious in light of Maruta.

With regard to **claim 2**, the Office Action that was mailed on April 24, 2006 (the rejections of which were maintained by the Final Office Action, which was mailed August 8, 2006), directs the attention of the Applicants to column 11, lines 51-57, of Maruta. However, the cited portion discusses formats of image data and does not disclose or suggest a configurable billing system wherein the coded billing strategy further comprises information regarding a format in which information regarding the aspects of interest will be communicated to the billing system by the machine as recited in **claim 2**.

For at least the foregoing additional reasons, **claim 2** is not anticipated and is not obvious in light of Maruta.

Regarding **claim 3**, the cited portion of column 10, lines 23-34, of Maruta discusses detecting the size of the document and performance of an “ACS” process associated with a color determination. However, it is respectfully submitted that the cited portion of Maruta does not disclose or suggest that each meter in a list of meters included in a coded billing strategy is described as a function of at least one of the listed aspects of interest, as recited in **claim 3**.

For at least the foregoing additional reasons, **claim 3** is not anticipated and is not obvious in light of Maruta.

Regarding **claim 4**, it is respectfully submitted that column 10, lines 43-53, of Maruta discuss calculating the cost of printing. However, the cited portion of column 10 does not disclose or suggest a coded billing strategy comprising information associated with the listed meters, the information describing the function of the meters (e.g., see FIG. 2, **218, 222, 226, 230**; FIG. 4, **418, 422, 426**, of the present application), as recited in **claim 4**.

Regarding **claims 5 and 7**, column 10, lines 4-21, of Maruta cited by the Office Action that was mailed on April 24, 2006 (rejections of which were maintained by the Final Office Action, which was mailed August 8, 2006), mention clearing a memory area corresponding to the cost storage and does not disclose or suggest a plurality of meters are instantiated in memory. However, even if the cited portion of Maruta could be construed as disclosing a plurality of meters instantiated in memory, Maruta does not disclose or suggest a plurality of meters instantiated in memory, by a billing module, according to a coded billing strategy or billing strategy description (e.g., see FIG. 2, **210**; FIG. 4, **410**) as recited in **claims 5 and 7**.

For at least the foregoing additional reasons, **claims 4, 5 and 7** are not anticipated and are not obvious in light of Maruta.

Regarding independent **claims 16, 19 and 22**, the Office Action that was mailed on April 24, 2006 (rejections of which were maintained by the Final Office Action, which was mailed August 8, 2006), asserts that Maruta discloses a document processing system comprising a configurable billing system operable to follow a billing strategy specification including an arbitrarily long list of document product events of interest, an arbitrarily long list of meter descriptions and a machine-readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy defined for the machine.

In support of this assert, the Office Action directs the attention of the Applicants to column 9, lines 29-53, and column 10, lines 1-10. Additionally, in support of the assertion that Maruta discloses a marker module operative to control the print engine in the production of documents, and to report document production events to the billing system, the Office Action directs the attention of the Applicants to column 10, lines 43-63.

However, column 10, lines 1-10, has been discussed above and does not disclose or suggest a configurable billing system operative to follow a billing strategy specification including an arbitrarily long list of document production events of interest and an arbitrarily long list of meter descriptions or a machine-readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy defined for the machine.

Column 9, lines 20-53, discuss a cost calculation and the use of four specific (and, it is submitted, hard coded) meters associated with that calculation. It is

respectfully submitted that the cited portion of column 9 does not disclose or suggest a configurable billing system operable to follow a billing strategy specification including an arbitrarily long list of document production events of interest, an arbitrarily long list of meters descriptions and a machine-readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy. It is respectfully submitted that the combination of the cited portions of column 9 and the upper portion of column 10 does not disclose or suggest a configurable billing system, a configurable billing system operable to follow a billing strategy specification, or a configurable billing system operable to follow a billing strategy specification including an arbitrarily long list of documents production events of interest, an arbitrarily long list of meter descriptions and a machine readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy defined for the machine.

Additionally, it is respectfully submitted that column 10, lines 43-62, discuss events that occur prior to printing a document. Column 10, lines 63-65, discuss the pressing of an "OK" button which initiates (S143) a copy operation. Therefore, column 10, lines 43-63, does not disclose or suggest a marker module operative to control the print engine in the production of documents, and to report document production events to a billing system. It is respectfully submitted that Murata discusses an analysis of a potential print job and not the recordation of aspects of actual production events.

For at least the foregoing reasons, independent **claims 16, 19 and 22**, as well as **claims 17-18**, which depend from **claim 16**, are not anticipated and are not obvious in light of Maruta.

With regard to **claim 17**, the Office Action that was mailed on April 24, 2006 (rejections of which were maintained by the Final Office Action, which was mailed August 8, 2006), cites column 10, lines 43-63, of Maruta. However, as explained above, the cited portion of Maruta discuss steps involved in calculating an anticipated printing cost and does not disclose or suggest a marker module delivering a billing strategy to a billing system.

For at least the foregoing additional reasons, **claim 17** is not anticipated and is not obvious in light of Maruta.

With regard to **claim 23**, the Office Action that was mailed on April 24, 2006 (rejections of which were maintained by the Final Office Action, which was mailed August 8, 2006), asserts that Maruta discloses a document processor including a billing strategy file defining a billing strategy in machine-readable form, the billing strategy file describing an arbitrarily large number of mathematical functions of an arbitrarily large number of meters for processing and recording information reported by the at least one aspect sensor, and directs the attention of the Applicants to column 10, lines 1-10, in support of the assertion. Additionally, the Office Action asserts that Maruta discloses a billing module operative to receive the billing strategy file and instantiate the arbitrarily large number of meters according to the billing strategy and directs the attention of the Applicants to column 10, lines 43-63, in support of the assertion.

However, column 10, lines 1-10, indicates that when a "cost calculation" is selected at an initial screen of FIG. 8A, the rate is displayed according to the cost calculation process, and a copy operation process is executed after confirmation is made of the indicated cost. It is respectfully submitted that column 10, lines 1-10, does not disclose or suggest a billing strategy file. Furthermore, the cited portion of column



10 does not disclose or suggest a billing strategy file defining a billing strategy. Furthermore, column 10, lines 1-10, does not disclose or suggest a billing strategy file describing an arbitrarily large number of mathematical functions of an arbitrarily large number of meters for processing and recording information reported by the at least one aspect sensor.

It is respectfully submitted that the lower portion of column 10 (lines 43-63) is directed toward a method for calculating an estimate of the cost of producing a document and displaying the cost to a user. Column 10, lines 43-63, does not disclose or suggest a billing module operative to receive a billing strategy file. Furthermore, column 10, lines 43-63, does not disclose or suggest a billing module that is operative to instantiate an arbitrarily large number of meters according to the billing strategy.

For at least the foregoing reasons, **claim 23** is not anticipated and is not obvious in light of Murata.

In response to arguments similar to those submitted above, and with regard to **claims 1-23**, section 7 of the Final Office Action indicates that the Office is not giving any patentable weight to the recitation of a configurable billing system in the preamble of the claims and asserts that there are no limitations in **claim 1** in which configuring a billing system is performed.

However, **claim 1** is a system claim and not a method claim. Accordingly, **claim 1** recites system components which are useful for configuring a billing system and not a procedure for configuring a billing system. Moreover, **claim 1** recites system components which are not anticipated by Murata. For example, **claim 1** recites a coded billing strategy and a plurality of meters whereby the billing system tallies the aspects in a manner defined in the billing strategy. Furthermore, the coded billing strategy

includes an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine. The machine and the aspects of interest are first mentioned in the preamble.

It is respectfully submitted that Murata does not disclose a coded billing strategy including a arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine and a plurality of meters updated by the billing system for recording the delivery of the aspects of the product or service based on the billing strategy, whereby the billing system tallies the aspects in a manner defined in the billing strategy.

Additionally, or alternatively, it is respectfully submitted that "a claim preamble has the import that the claim as a whole suggests for it," *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995). In this regard, it is respectfully submitted that the body of claim 1 relies on the preamble to provide a proper antecedent basis for --the machine-- and --aspects of the product or service--. Accordingly, the body of claim 1 does depend on the preamble for completeness (see *In re Hirao*, cited by the Final Office Action), and it is respectfully submitted that the recitation of a configurable billing system in the preamble of **claim 1** should be given patentable weight.

For at least the foregoing additional reasons, **claim 1**, as well as **claims 2-5**, which depend therefrom, is not anticipated by Maruta.

**Claim 6** also recites a configurable billing system. The system includes a billing strategy description, a plurality of meters defined in the billing strategy and a billing module operative to update the plurality of meters according to the billing strategy description. Accordingly, arguments similar to those submitted in support of **claim 1** are

submitted in support of **claim 6**. Maruta does not disclose or suggest a system including a billing strategy description. Moreover, even if Maruta could be construed as disclosing a system including a billing strategy description, Maruta does not disclose or suggest a system including a billing strategy description including an arbitrarily long list of aspects of interest and/or an arbitrarily long list of meter descriptions which is accessible by a billing system. Moreover, Maruta does not disclose or suggest a billing module operative to update a plurality of meters according to a billing strategy description.

Additionally, or alternatively, the body of **claim 6** depends on the preamble to provide an antecedent basis for --the billing system--. Therefore, the body of **claim 6** depends on the preamble for completeness, and the preamble should be accorded patentable weight.

**Claim 16** recites *inter alia*: a configurable billing system operative to follow a billing strategy specification including an arbitrarily long list of document production events of interest, an arbitrarily long list of meter descriptions and a machine-readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy specification.

The portion of the Final Office Action directed to **claim 16** does not address the recitation of a configurable billing system. It is respectfully submitted that Maruta discloses a system fixed with four counters. The billing system of Maruta is not configurable. Additionally, Maruta does not disclose or suggest a billing strategy specification including an arbitrarily long list of document production events of interest or an arbitrarily long list of meter descriptions. Furthermore, Maruta does not disclose or

suggest a billing strategy including a machine-readable script for updating the meters defining the list.

It is respectfully submitted that one of ordinary skill in the art would understand the phrase --machine-readable script--. Additionally, it is respectfully submitted that one of ordinary skill in the art would not construe Maruta as disclosing or suggesting a billing strategy specification including a machine-readable script for updating the meters defined in a list.

Further in this regard, it is respectfully submitted that claim 9 of U.S. Patent No. 6,839,715 B1 recites a human-readable script. Claims 1, 4, 7, 11, 13 and 22 of U.S. Patent No. 6,595,781 recite generating and storing digitally-readable script files or uses or inclusions thereof. Accordingly, it is respectfully submitted that one need not read limitations from the specification into the phrase --machine-readable script-- in order to understand the scope of **claim 16** and that Maruta does not disclose or suggest a machine-readable script or a billing strategy specification including a machine readable script for updating meters defined in a list.

For at least the foregoing reasons, it is respectfully submitted that **claim 16**, as well as **claims 17** and **18**, which depend therefrom, is not anticipated and is not obvious in light of Maruta.

**Claim 19** recites a method for developing and using a universal billing module, the method comprising *inter alia*: predefining a billing strategy specification, the billing strategy specification including a list of parameters with implicit or explicit communication mechanisms and data parsing information and process algorithm information in the form of a machine-readable script, storing the billing strategy specification in a machine-readable form, reading the stored billing strategy

specification and instantiating meter data structures as directed by the read billing strategy specification. It is respectfully submitted that Maruta does not disclose or suggest at least these elements of **claim 19**. Additionally, arguments similar to those submitted above with regard to **claim 16** are submitted in support of **claim 19**. Maruta does not disclose or suggest a machine-readable script or a machine-readable script included in a billing strategy specification. Furthermore, it is not necessary to read limitations from the specification into the phrase --machine-readable script-- for one of ordinary skill in the art to come to this conclusion. Accordingly, it is respectfully submitted that **claim 19**, is not anticipated and is not obvious in light of Maruta.

**Claim 20** recites a configurable billing system for a machine. The body of the claim depends on the preamble for antecedence and, therefore, completeness. Accordingly, the preamble, including the recitation of a configurable billing system should be given patentable weight. Additionally, the body of the claim recites *inter alia*: a custom billing strategy file including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine, a means for loading the custom billing strategy file and a plurality of meters instantiated by the billing system for recording the delivery of the aspects of the product or service based on the billing strategy. It is respectfully submitted that Maruta does not disclose or suggest a custom billing strategy file or a means for loading a custom billing strategy file. Moreover, Maruta does not disclose or suggest a custom billing strategy file including an arbitrarily long list of aspects of interest or an arbitrarily long list of meter descriptions or a plurality of meters instantiated by the billing system based on the billing strategy.

For at least the foregoing reasons, it is respectfully submitted that **claim 20** is not anticipated and is not obvious in light of Maruta.

Arguments similar to arguments submitted in support of **claims 1 and 19** are submitted in support of **claim 21**. **Claim 21** recites *inter alia*: a coded billing strategy description accessible by the billing system, including a machine-readable script. The body of **claim 21** depends on the preamble for antecedence and, therefore, completeness. Accordingly, the preamble should be accorded patentable weight. Furthermore, Maruta does not disclose or suggest a coded billing strategy description accessible by the billing system, including a machine-readable script. Additionally, **claim 21** recites a plurality of meters defined in the machine-readable script as mathematical functions of information received from one or more aspect sensors. It is respectfully submitted that Maruta does not disclose or suggest a plurality of meters defined in a machine-readable script, or defined in a machine-readable script as mathematical functions of information received from one or more aspect sensors. Similar arguments are submitted with respect to the recitation of a billing module of **claim 21**.

For at least the foregoing reasons, **claim 21** is not anticipated and is not obvious in view of Maruta.

**Claim 22** recites a document processing system comprising *inter alia*: a configurable billing system operative to run a machine-readable script received in a billing strategy file, the machine readable script being operative to, at least one of, instantiate and update a set of meters for recording the occurrence of document production.

It is respectfully submitted that Maruta does not disclose or suggest a configurable billing system operative to run a machine-readable script received in a billing strategy file. Indeed, it is respectfully submitted that Maruta does not disclose or

suggest a configurable billing system. Moreover, it is respectfully submitted that Maruta does not disclose or suggest receiving a machine-readable script or receiving a machine-readable script in a billing strategy file. Furthermore, Maruta does not disclose or suggest a machine-readable script being operative to, at least one of, instantiate and update a set of meters.

For at least the foregoing reasons, **claim 22** is not anticipated and is not obvious in view of Maruta.

Additionally, **claim 22** recites a configurable billing system. The Final Office Action indicates that the recitation of --configurable billing system-- was not given any patentable weight with regard to **claim 1** because it occurs in the preamble. That the Final Office Action includes this assertion and does not include a rebuttal of the merits of the Applicants' earlier assertion that Maruta does not disclose or suggest a configurable billing system suggests that the Office recognizes that Maruta does not disclose or suggest a configurable billing system.

In this regard, it is noted that **claim 22** recites a configurable billing system in the body of the claim. Even if the Office were justified in not giving the phrase --configurable billing system-- patentable weight in **claim 1** (which is disputed), it is respectfully submitted that the phrase --configurable billing system-- must be given patentable weight in **claim 22**.

For at least the foregoing additional reasons, **claim 22** is not anticipated and is not obvious in light of Maruta.

**Claim 23** recites a document processor comprising *inter alia*: a billing strategy file defining a billing strategy in machine-readable form, the billing strategy file describing an arbitrarily large number of mathematical functions of an arbitrarily large

number of meters for processing and recording information recorded by the at least one aspect sensor and a billing module operative to receive the billing strategy file and instantiate the arbitrarily large number of meters according to the billing strategy.

It is respectfully submitted that the phrase --arbitrarily large number-- is as definite as the phrase --arbitrarily long-- is. In this regard, please see the discussion above, and the allowed claims of the patents issued by the U.S. Patent and Trademark Office that include such phrases that are identified above. It is respectfully submitted that Maruta does not disclose or suggest a billing strategy file or a billing strategy file defining a billing strategy in machine-readable form. Moreover, Maruta does not disclose or suggest a billing strategy file describing an arbitrarily large number of mathematical functions of an arbitrarily large number of meters. Instead, it is submitted that the system of Maruta includes four, and only four, counters (column 9, lines 25-26). Maruta does not disclose or suggest a billing module operative to receive a billing strategy file. Moreover, Maruta does not disclose or suggest a billing module operative to receive a billing strategy file and instantiate an arbitrarily large number of meters according to the billing strategy.

It is respectfully submitted that nothing in the general references to column 9, lines 20-55; column 10, lines 43-62; and column 12, lines 12-53, cited by the Final Office Action, disclose or suggest a coded billing strategy, a configurable billing system, a billing strategy file, a custom billing strategy file, a predefined billing strategy specification, or a billing strategy description. It is respectfully submitted that the description of counters in the cited portion of column 9 does not disclose or suggest that the counters are described in a coded billing strategy or that such a coded billing strategy includes an arbitrarily long list of aspects of interest and an arbitrarily long list of



meter descriptions. The description of steps involved in calculating a cost found in the cited portion of column 10 does not disclose or suggest a coded billing strategy or coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions. It is respectfully submitted that the general reference to programs and data stored on a hard disk found in the cited portion of column 12 does not disclose or suggest a coded billing strategy or a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions.

Arguments similar to these are submitted with respect to the billing strategy description recited in **claim 6**, the configurable billing system and billing strategy specification recited in **claim 16**, the predefined billing strategy specification including a list of parameters with implicit or explicit communication mechanisms and data parsing information recited in **claim 19**, the custom billing strategy file recited in **claim 20**, the coded billing strategy description, including a machine-readable script, recited in **claim 21**, the configurable billing system operative to run a machine-readable script recited in **claim 22** and the billing strategy file defining a billing strategy in machine-readable form recited in **claim 23**.

With regard to **claim 2**, it is respectfully submitted that the description in column 11, lines 51-57, of an image file does not disclose or suggest a coded billing strategy including information regarding a format in which information regarding the aspect of interest will be communicated to the billing system by the machine. Maruta does not disclose or suggest that image data will be communicated to a billing system. It is respectfully submitted that image data would not be communicated to a billing system. Even though the cited portion of column 11 includes the word --format--, the cited

portion of column 11 does not disclose or suggest a coded billing strategy further comprising information regarding a format in which information regarding the aspect of interest will be communicated to a billing system by a machine.

Column 10, lines 23-34, of Maruta discuss the scanning and analysis of an image set in a predetermined position on a glass platen. It is respectfully submitted that the cited portion of column 10 does not disclose or suggest that meters are included in a list of meters. Moreover, the cited portion of column 10 does not disclose or suggest that a meter is described as a function of at least one of the listed aspects of interest as recited in **claim 3** of the present application.

Column 10, lines 43-53, describe a printing cost calculation. However, the cited portion of column 10 does not disclose or suggest that a coded billing strategy includes information associated with listed meters, the information describing the function of the meters as recited in **claim 4**.

Column 10, lines 14-21, mention clearing a memory area corresponding to the cost storage in RAM 102. However, it is respectfully submitted that disclosure of clearing a memory area does not disclose or suggest a plurality of meters are instantiated in memory by a billing system according to a coded billing strategy as recited in **claims 5 and 7** of the present application.

For at least the foregoing additional reasons, **claims 2-5 and 7** are not anticipated and are not obvious in light of Maruta.

**Claim 17** depends from **claim 16** and is not anticipated and is not obvious for at least that reason.

With regard to **claims 8-15 and 18**, the Final Office Action asserts that Applicants' arguments failed to comply with 37 CFR 1.111(b) because they amount to a

general allegation of the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes from the references. However, the rejections in question stipulate that Maruta fails to specify other aspects of interest, such as impression count, impression flag, set count, set completion flag, diagnostic impression flag, media descriptor, highlight color flag or full color flag. Since the Final Office Action stipulated that Maruta fails to disclose these aspects, which are recited, for example, in **claims 8-15** of the present application, there was no need for the Applicants to specifically point out how the language of the claims patentably distinguishes from the reference. The Official Notice taken by the previous Final Office Action, which amounts to a general allegation that the claims do not define a patentable invention without specifically pointing out a reference that is combinable with Maruta, is respectfully traversed.

For at least the foregoing additional reasons, **claims 8-15** and **18** are not anticipated and are not obvious in light of Maruta.

E. The Claims are not Obvious

**Claims 8-15** and **18** were rejected under 35 U.S.C. 103(a) as being unpatentable over Maruta. However, **claims 8-15** depend from **claim 6** and are not anticipated and are not obvious for at least that reason. Additionally, it is respectfully submitted that Maruta does not disclose a flexible or configurable billing system that can be configured to consider an impression count or impression event flag when, for example, associated with a first document processor and to consider a set count or set completion flag when, for example, associated with a second document processing system.

For at least the foregoing reasons, **claims 8-15** are not anticipated and are not obvious in light of Maruta.

**Claim 18** depends from **claim 16** and is not anticipated and is not obvious for at least that reason.

F. The Amendment to Claim 22 Presented in Applicants' Amendment E did not Raise New Issues

Applicants' Amendment E was refused entry because Amendment E included an amendment to **claim 22** to recite "a set of meters for recording occurrences of document production events" and this amendment allegedly raised new issues.

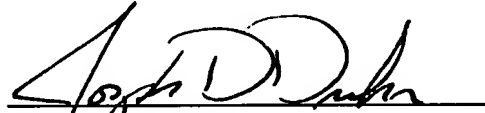
However, it is respectfully submitted that this assertion represents a **clear error** of the Office Actions. This clarifying amendment to **claim 22** should not have raised new issues. For example, the preamble to **claim 6** recites a plurality of aspects sensors operative to detect **document production events** and to report the aspects of the document production to the billing system. Additionally, **claim 21** recites a configurable billing system for a document processing system, the document processing system including *inter alia*: one or more aspect sensor operative to **detect document production events** and to **report the document production events** to the billing system. Accordingly, it is respectfully submitted an amendment to **claim 22** adding the word --events-- so that **claim 22**, as indicated above, should not have raised new issues.

For at least the foregoing reasons, it is respectfully submitted that Applicants' Amendment E did not raise new issues. Accordingly, it is respectfully requested that the Examiner's refusal to enter Applicants' Amendment E be reversed.

CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that claims 1-23 are in condition for allowance. For all of the above reasons, Appellants respectfully request this Honorable Board to reverse the rejections of claims 1-23.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Joseph D. Dreher", written over a horizontal line.

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Filed: April 25, 2007

## **APPENDICES**

### **VIII. CLAIMS APPENDIX:**

Claims involved in the Appeal are as follows:

1. (Previously Presented) A configurable billing system for a machine, the machine operative to output a product or service and including a plurality of aspect sensors, the sensors operative to detect the delivery of aspects of the product or service and to report the delivery to the billing system, the billing system comprising:

a coded billing strategy including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine; and

a plurality of meters updated by the billing system for recording the delivery of the aspects of the product or service based on the billing strategy, whereby the billing system tallies the aspects in a manner defined in the billing strategy.

2. (Previously Presented) The configurable billing system of claim 1 wherein the coded billing strategy further comprises information regarding a format in which information regarding the aspects of interest will be communicated to the billing system by the machine.

3. (Previously Presented) The configurable billing system of claim 1 wherein each meter in the list of meters is described as a function of at least one of the listed aspects of interest.

4. (Previously Presented) The configurable billing system of claim 1 wherein the coded billing strategy comprises information associated with the listed meters, the information describing the function of the meters.

5. (Previously Presented) The configurable billing system of claim 1 wherein the plurality of meters are instantiated in memory, by the billing system, according to the coded billing strategy.

6. (Previously Presented) A configurable billing system for an document processing system, the document processing system operative to produce documents and including a plurality of aspect sensors operative to detect document production events and to report the aspects of the document production to the billing system, the billing system comprising:

a billing strategy description, including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions, accessible by the billing system;

a plurality of meters defined in the billing strategy; and

a billing module operative to update the plurality of meters according to the billing strategy description.

7. (Previously Presented) The configurable billing system of claim 6 wherein the plurality of meters are instantiated in memory, by the billing module, according to the billing strategy description.

8. (Previously Presented) The configurable billing system of claim 6 wherein the list of aspects of interest comprises an impression count.

9. (Previously Presented) The configurable billing system of claim 6 wherein the list of aspects of interest comprises an impression event flag.

10. (Previously Presented) The configurable billing system of claim 6 wherein the list of aspects of interest comprises a set count.

11. (Previously Presented) The configurable billing system of claim 6 wherein the list of aspects of interest comprises a set completion flag.

12. (Previously Presented) The configurable billing system of claim 6 wherein the list of aspects of interest comprises a diagnostic impression flag.

13. (Previously Presented) The configurable billing system of claim 6 wherein the list of aspects of interest comprises a media descriptor.

14. (Previously Presented) The configurable billing system of claim 6 wherein the list of aspects of interest comprises a highlight color flag.

15. (Previously Presented) The configurable billing system of claim 6 wherein the list of aspects of interest comprises a full color flag.



16. (Previously Presented) A document processing system comprising:  
a print engine;  
a configurable billing system operative to follow a billing strategy specification including an arbitrarily long list of document production events of interest, an arbitrarily long list of meter descriptions and a machine readable script for updating the meters defined in the list to record the occurrence of document production events as described in the billing strategy specification; and,

a marker module operative to control the print engine in the production of documents, and to report document production events to the billing system.

17. (Original) The document processing system of claim 16 wherein the marker module is operative to deliver the billing strategy to the billing system.

18. (Original) The document processing system of claim 16 wherein the print engine further comprises a xerographic printer.

19. (Previously Presented) A method for developing and using a universal billing module, the method comprising:

predefining a billing strategy specification, the billing strategy specification including a list of parameters with implicit or explicit communication mechanisms and data parsing information, and process algorithm information in the form of a machine readable script;

storing the billing strategy specification in a machine-readable form;

reading the stored billing strategy specification;

instantiating meter data structures as directed by the read billing strategy specification;

monitoring a document processing procedure as directed by the read billing strategy specification; and

updating the meter data structures as directed by the read billing strategy specification.

20. (Previously Presented) A configurable billing system for a machine, the machine operative to output a product or service and including a plurality of aspect sensors, the sensors being operative to detect the delivery of aspects of the product or service and to report the delivery to the billing system, the billing system comprising:

a custom billing strategy file including an arbitrarily long list of aspects of interest and an arbitrarily long list of meter descriptions defined for the machine;

a means for loading the custom billing strategy file; and,

a plurality of meters instantiated by the billing system for recording the delivery of the aspects of the product or service based on the billing strategy whereby the billing system tallies the aspects in a predefined manner.

21. (Previously Presented) A configurable billing system for a document processing system, the document processing system operative to produce documents and including one or more aspect sensor operative to detect document production events and to report the document production events to the billing system, the billing system comprising:

a coded billing strategy description, accessible by the billing system, including a machine-readable script;

a plurality of meters defined in the machine-readable script as mathematical functions of information received from one or more aspect sensors; and

a billing module operative to update the plurality of meters according to the functions implemented by the machine-readable script.

22. (Previously Presented) A document processing system comprising:

a print engine;

a configurable billing system operative to run a machine-readable script received in a billing strategy file, the machine-readable script being operative to, at least one of, instantiate and update a set of meters for recording the occurrence of document production; and,

a marker module operative to control the print engine in the production of documents, and to report document production events to the billing system.

23. (Previously Presented) A document processor operative to produce printed documents, the document processor comprising:

a print engine;

at least one aspect sensor operative to sense and report at least one of an impression count, an impression event, a set count,, a diagnostic impression event, a media description, a use of highlight color and a use of full color related to a production of a document;

a billing strategy file defining a billing strategy in machine readable form, the billing strategy file describing an arbitrarily large number of mathematical functions of an arbitrarily large number of meters for processing and recording information reported by the at least one aspect sensor;

a billing module operative to receive the billing strategy file and instantiate the arbitrarily large number of meters according to the billing strategy; and

a marker module operative to control the print engine in the production of the document.

IX. EVIDENCE APPENDIX

Appellant, Appellant's representative, and/or the Assignee are aware of no evidence submitted under 37 CFR §§1.130, 1.131, or 1.132 or of any other evidence entered by the Examiner and relied upon by the Appellant in the present appeal. Accordingly, the remainder of this page has been intentionally left blank.

X. RELATED PROCEEDINGS APPENDIX

Appellant, Appellant's representative, and/or the Assignee are aware of no related proceeding in connection with this matter. Accordingly, the remainder of this page has been intentionally left blank.